

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A process for manufacturing a semiconductor device comprising:
~~the steps of:~~

forming an SiOC-containing insulating film on a semiconductor substrate[,] ; ~~and~~
~~then~~

selectively removing the insulating film[,] ; and

~~and removing the residue generated during the previous step~~ said selectively
removing said insulating film with a fluoride-free weak alkaline stripper.

2. (Currently Amended) A process for manufacturing a semiconductor device comprising:
~~the steps of:~~

forming an insulating film having a specific dielectric of not greater than 4 ~~or less~~
on a semiconductor substrate by one of CVD and ~~or~~ sputtering[,] ~~and then~~ ;

selectively removing the insulating film[,] ; and

~~and removing the residue generated during the previous step~~ said selectively
removing said insulating film with a fluoride-free weak alkaline stripper.

3. (Currently Amended) The process for manufacturing a semiconductor device as
claimed in Claim 2, wherein the insulating film comprises silicon and carbon as constituent
elements.

4. (Currently Amended) The process for manufacturing a semiconductor device as
claimed in Claim 1, wherein the stripper has a pH within a range of more than 7 and not

greater than 11 or less.

5. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 2, wherein the stripper has a pH within a range of more than 7 and not greater than 11 or less.

6. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 1, wherein the stripper comprises an amine.

7. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 2, wherein the stripper comprises an amine.

8. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 1, wherein ~~the step of~~ said selectively removing the insulating film comprises:

forming a resist having an opening on the insulating film[,] ;

selectively removing the insulating film using the resist as a mask, ~~and then ;~~ and

removing at least part of the resist by ashing.

9. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 2, wherein ~~the step of~~ said selectively removing the insulating film comprises:

forming a resist having an opening on the insulating film[,] ;

selectively removing the insulating film using the resist as a mask, ~~and then ;~~ and

removing at least part of the resist by ashing.

10. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 1, further comprising:

~~a step of~~ rinsing the product using a non-aqueous rinse agent alone after ~~the step of~~ removing the residue.

11. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 2, further comprising:

~~a step of~~ rinsing the product using a non-aqueous rinse agent alone after ~~the step of~~ removing the residue.

12. (Currently Amended) A process for manufacturing a semiconductor device comprising: ~~the steps of:~~

forming a copper-containing metal film and then an SiOC-containing insulating film on a semiconductor substrate;

selectively removing the insulating film to form a concave such that part of the copper-containing film is exposed; and

removing a residue generated during ~~selective removal of~~ said selectively removing the insulating film with a fluoride-free weak alkaline stripper.

13. (Currently Amended) A process for manufacturing a semiconductor device comprising: ~~the steps of:~~

forming a copper-containing metal film on a semiconductor substrate and then an insulating film having a specific dielectric constant of not greater than 4 or less by one of CVD and or sputtering[.];

selectively removing the insulating film to form a concave such that a part of the copper-containing film is exposed[.]; and

removing a residue generated during ~~selective removal of~~ said selectively removing the insulating film with a fluoride-free weak alkaline stripper.

14. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 13₁ wherein the insulating film comprises silicon and carbon as constituent elements.

15. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 12₁ wherein the stripper has a pH within a range of more than 7 and not greater than 11 ~~or less~~.

16. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 13₁ wherein the stripper has a pH within a range of more than 7 and not greater than 11 ~~or less~~.

17. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 12₁ wherein the stripper comprises an amine.

18. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 13₁ wherein the stripper comprises an amine.

19. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 12₁ wherein ~~the step of~~ said selectively removing the insulating film comprises:

forming a resist having an opening on the insulating film[,];

selectively removing the insulating film using the resist as a mask, ~~and then~~ ; and

removing at least part of the resist by ashing.

20. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 13, wherein ~~the step of said~~ selectively removing the insulating film comprises:

forming a resist having an opening on the insulating film[,] ;

selectively removing the insulating film using the resist as a mask, ~~and then ; and~~

removing at least part of the resist by ashing.

21. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 12, further comprising:

~~a step of~~ rinsing the product using a non-aqueous rinse agent alone after ~~the step of~~ removing the residue.

22. (Currently Amended) The process for manufacturing a semiconductor device as claimed in Claim 13, further comprising:

~~a step of~~ rinsing the product using a non-aqueous rinse agent alone after ~~the step of~~ removing the residue.

23. (New) The process for manufacturing a semiconductor device according to claim 1, wherein said stripper comprises a stripper that does not dissolve said SiOC-containing insulating film.

24. (New) The process for manufacturing a semiconductor device according to claim 1, wherein said fluoride-free weak alkaline stripper comprises a mixture of an amine, an organic solvent, water, an anticorrosive and an organic acid.

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25. (New) The process for manufacturing a semiconductor device according to claim 1, wherein said selectively removing said insulating film comprises dry etching said insulating film.